DOCUMENT RESUME

ED 124 029 HE 007 868

TITLE	A Report on the Indirect Costs of Academic Research.
INSTITUTION	American Council on Education, Washington, D.C.
SPONS AGENCY	National Institutes of Health (DHEW), Bethesda, Md.nd
PUB DATE	Mar 76
CONTRACT	N01-PP-5-2159
NOTE	21p.
EDRS PRICE	MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS	*Cost Indexes; *Costs; Economic Factors; Educational Finance; Federal Aid; Federal Programs; Financial Support; Health Occupations Education; Health Services; *Higher Education; *Policy Formation; *Research Projects

ABSTRACT

Policy implications of the indirect costs of academic research were studied as part of a federally-supported project called "Studies of the Impacts of Federal Health-Related Research Expenditures upon Institutions of Higher Education." Since proposals for substantial changes in federal regulations governing reimbursements for the indirect costs of academic research have recently appeared, the status of these developments is reviewed. Particular attention is given to the communications between representatives of universities and their associations and representatives of the Executive Branch and the Congress for the purpose of achieving agreement on procedures for resolving the issues raised. Digests of material from Raymond J. Woodrow's monograph entitled "Indirect Costs in Universities" and other sources are presented that relate to policy implications. The discussion is organized under six headings: (1) the determination of indirect cost rates; (2) policy limitations upon the recovery of costs of research; (3) rising trends in indirect costs; (4) indirect-cost problems arising within academic research institutions; (5) recent proposals for revisions of federal indirect-cost regulations; and (6) general conclusions. (LBH)

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ED124029

A REPORT ON THE INDIRECT COSTS OF ACADEMIC RESEARCH

Submitted by

American Council on Education
Association of American Medical Colleges
The Rand Corporation

to the

President's Biomedical Research Panel

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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HE 007 868

March 1976

Conducted under Contract No. NO1-PP-5-2159 between the American Council on Education and the National Institutes of Health for "Studies of the Impacts of Federal Health-Related Research Expenditures upon Institutions of Higher Education."

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A REPORT ON THE INDIRECT COSTS OF ACADEMIC RESEARCH

I. Introduction

A study of the policy implications of the indirect costs of academic research was one of the tasks specified by the President's Biomedical Research Panel in the contract with the American Council on Education for "Studies of the Impacts of Federal Health-Related Research Expenditures upon Institutions of Higher Education." The Panel defined its interests in the problem of indirect costs in terms of the following questions:

1. How are indirect costs determined and indirect cost rates negotiated?
2. How is the audit process conducted for renegotiation of indirect cost rates?
3. What differences are there between federal and non-federal funding agencies in policies covering indirect costs and the development of indirect-cost rates?
4. What patterns exist in the control and allocation of federal indirect-cost reimbursements?
5. What policies and restrictions are followed as to the uses that can be made of such funds?
6. What is the institutional attitude toward present federal percentage levels, federal restrictions, and federal administrative procedures relative to such funds?

It was agreed in the proposal for the general investigation that the study of indirect costs would be the joint responsibility of the American Council on Education (ACE, the prime contractor) and its two subcontractors, the Association of American Medical Colleges (AAMC) and the Rand Corporation (RAND). The present report has been prepared, therefore, under the joint aegis of the project directors for the three organizations: Lyle H. Lanier (ACE), Thomas E. Morgan (AAMC), and Albert P. Williams (RAND).

II. Procedure

It was decided that systematic answers to most of the Panel's questions could best be provided through the preparation of a comprehensive monograph by an individual with extensive experience in university research administration who had also been involved in the participation of higher-education representatives in the development of federal indirect-cost regulations. Raymond J. Woodrow of Princeton University was selected for this task as being the best-qualified person available.[1] His monograph entitled Indirect Costs in Universities (11) is being submitted as a supplement to the present report; and the Table of Contents has been reproduced herein as Appendix A.

Other contributors of material for this study included Frederick B. Putney of Columbia University who prepared a paper elaborating on the numerous misconceptions of the nature of indirect costs and providing a detailed example of indirect-cost calculations for a hypothetical university.

On a different aspect of the problem, George W. Baughman of Ohio State University assembled data designed to explain why indirect costs have been increasing recently at a more rapid rate than the direct costs of research. His source was the Ohio Higher Education Price Index of the Ohio Board of Regents, which is based on price-change data for the twelve state-assisted universities in Ohio. Comparative percentage changes for selected components of this price-index series have been included in this report.

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[1] Raymond J. Woodrow served for many years as Director of Research Administration and Executive Secretary of the University Research Board at Princeton University. He was a consultant and member of various national committees concerned with federal indirect-cost regulations, and has published several articles on the subject (cited among the references in his present monograph). Since his retirement from the position named above, he has directed an NSF-supported project on research management in universities under the aegis of Princeton's University Research Board.

Inasmuch as proposals for substantial changes in federal regulations governing reimbursements for the indirect costs of academic research have recently appeared, a final section has been included in this report on the status of these developments. Particular attention has been given to the communications between representatives of universities and their associations and representatives of the Executive Branch and the Congress for the purpose of achieving agreement on procedures for resolving the issues raised.

The following sections consist mainly of digests of material from Woodrow's monograph and other sources that relate to the Panel's questions and to other aspects of the policy implications of the indirect costs of academic research. The discussion has been organized under six headings: (a) the determination of indirect cost rates; (b) policy limitations upon the recovery of costs of research; (c) rising trends in indirect costs; (d) indirect-cost problems arising within academic research institutions; (e) recent proposals for revisions of federal indirect-cost regulations; (f) general conclusions.

III. The Determination of Indirect-Cost Rates

Federal policies and procedures governing reimbursement for the indirect costs of research conducted by universities have evolved through numerous stages since 1947, when the first set of regulations provided for the determination of an average indirect-cost rate covering all instructional and research activities of an institution--based largely on its regular financial report. They were superseded in 1958 by Bureau of the Budget Circular A-21, which was applicable only to research costs and which established a systematic set of costing principles and general guidelines (but not a detailed set of uniform accounting procedures). The document was developed by an interagency committee which worked closely with a group of university representatives organized by the American Council on Education.

Circular A-21 has been revised five times. In 1973, the responsibility for this function was transferred to the General Services Administration--which reissued the regulations without substantial change as Federal Management Circular No. 73-8 (FMC 73-8). Recently, the Office of Management and Budget (OMB) has reassumed this administrative responsibility.

Several points regarding this history of the federal regulations governing indirect costs and indirect-cost rates are pertinent to the major issued raised in discussions of this subject:

1. The research activities conducted by universities generally require numerous services and other support which fall under the accounting category of indirect costs and which can be most equitably prorated to individual projects on the basis of some such principles as those embodied in FMC 73-8.

2. Indirect costs are real costs that must be met by an institution from its operating budget. If individual projects or other activities requiring indirect-cost services do not pay their pro rata share of the cost, it must be borne by the remainder of the institution's budget.

3. Differences of opinion exist between federal agencies and universities as to what indirect costs are allowable as charges against research grants, but the responsible federal agency makes decisions in these cases and they are reflected in the indirect-cost rates finally approved after an appropriate auditing process.

4. To a considerable degree, current efforts to change the indirect-cost regulations arise from unsatisfactory accounting practices and poorly documented requests for reimbursement on the part of some institutions that presumably are attempting to comply with the regulations and the terms of their audited indirect-cost rates. Many of these criticsms are undoubtedly justified, and the higher-education associations mainly concerned are taking steps to urge their member institutions to institute more rigorous accounting and documentation procedures in claiming indirect-cost reimbursements.

5. The efforts to revise the policies and regulations, however, go far beyond steps to assure better compliance by a minority of institutions. The proposed changes would limit further the range of indirect costs eligible for reimbursement under research grants and contracts; and they would institute enormously costly changes in detailed accounting and reporting procedures (which the present FMC 73-8 specifically views as undesirable).

IV. Policy Limitations upon the Recovery of Costs of Research

The Congress and the Executive Branch have from time to time imposed ceilings or other forms of limitations upon full recovery of the costs of research by academic institutions. Such limitations have usually applied to grants rather than contracts (the limitations to such recovery under contracts relating mainly to what charges are "allowable" as indirect costs of research). In the case of research grants, initially there was a period in which indirect-cost reimbursement was limited to a fixed percentage of direct project costs. This percentage for NIH, for example, was first established at 8 per cent of

direct project costs--a limit that was first raised to 15 and later to 20 per cent for HEW projects. Curiously, independent agencies, by contrast, were allowed a reimbursement limit of 25 per cent for indirect costs for one year; but this was reduced to 20 per cent for the following year.

The Congress in 1965 abolished all indirect-cost ceilings but replaced them with a policy of "cost sharing." This statutory restriction provided that no recipient of a federal grant for research should be paid "as much as the entire cost of the project." Individual agencies were left reasonably free to determine how the cost-sharing policy should be implemented.

One reason given for requiring universities to share in the costs of grant-supported research is that such activity is an integral part of the institution's regular educational program and hence should not impose an extraneous added burden. In the abstract, this argument is a plausible one--and it is similar to the one usually made by foundations--but conformity to its "logic" would most assuredly curtail the level of university participation in the nation's research effort or else would seriously distort the total educational programs of universities by siphoning off resources required for the effective performance of important "non-sponsored" activities. The deteriorating general financial situation of research universities, caused by the combined effects of inflation and recession, makes the burden of sharing in the costs of federal programs increasingly difficult for institutions to bear.

Since precise information as to the full degree of cost sharing and as to the nature of its impacts upon different types of institutions is unavailable, it is believed that a systematic study of this problem should be sponsored by an appropriate government agency or agencies. Consideration should be given in such a study to a comparison of the federal indirect-cost policies applicable to industry with those prevailing for universities.

V. Rising Trends in Indirect Costs

The evidence is reasonably clear from several sources that the indirect costs of research as a proportion of total costs (or as a percentage of direct costs) have been rising in recent years. The evidence is not so clear, however, as to the magnitudes of these increases for various types of research activities or among different institutions. Furthermore, the reasons for such increases are not fully understood or adequately appreciated by many who are concerned about them. The present summary will present evidence on the trends in such increases for NIH grants to universities in the ACE sample, and will then cite price-increase data to show why indirect costs have increased at a faster rate than direct costs.

1. Changing Proportions of Indirect-Cost Funds in NIH Research Grants. From the NIH IMPAC files, records of the grant funds awarded to 145 universities were secured for a separate ACE study (6), together with the percentages of these funds provided for direct and indirect costs. Two types of trend indices have been computed for indirect costs: (a) the proportion of the total awards allocated for indirect costs; (b) indirect costs as percentages of direct costs. The following is a tabulation of these two sets of percentages covering the fiscal years 1969 through 1975:

	1969	1970	1971	1972	1973	1974	1975
Indirect Costs / Total Costs	21.7%	23.5%	24.4%	25.6%	26.8%	27.5%	26.5%
Indirect Costs / Direct Costs	27.7	30.7	32.3	34.4	36.6	37.9	36.0

2. Comparative Increases in Prices for Direct and Indirect Costs of University Operations. There are several reasons why indirect costs have increased more rapidly than direct costs of research in recent years. Probably the most significant has been the differential effects of inflation on the two types of expenditures. The direct-cost component of research expenditures has a higher proportion of salaries and wages than the indirect-cost component; and the former has been increasing at lower rates than the latter. The price increases for books and periodicals, utilities, and other non-personnel items have escalated far more rapidly in recent years than personnel compensation (which is the denominator in most formulae for determining indirect-cost rates)--as the following price-change percentages show:

Fiscal Year	AAUP[2] Faculty Compensation	Ohio Higher Education Price Index[3] All Prices	Non-Personnel Prices All	Library	Phys. Plant
1968-69	7.2%	5.7%	3.0%	4.8%	2.8%
1969-70	7.1	6.3	5.9	10.6	8.6
1970-71	6.2	6.0	8.5	11.5	9.7
1971-72	4.3	4.4	4.8	9.6	5.0
1972-73	5.0	5.9	9.0	12.1	10.2
1973-74	5.9	9.0	18.6	13.3	29.7
1974-75	6.4	10.6	14.8	18.2	21.0

Another major factor contributing to rising indirect costs has been the costs of compliance with federal laws and regulations--e.g., those relating to such federally mandated social programs as the following: equal employment opportunity, equal pay, affirmative action, occupational safety and health, minimum wage and fair-labor standards, Social Security increases, health-maintenance organizations, and environmental protection (10).

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[2] See References, number 1.

[3] Provided by George W. Baughman of Ohio State University from the price indices developed by the Ohio Board of Regents from the records of the twelve state-assisted universities in Ohio.

More specifically affecting federal grants and contracts are regulations relating to the utilization of labor surplus, small business concerns, minority business enterprises, the use of human subjects in research, animal-care requirements, employment openings for veterans, and employment of the handicapped. Compliance with these regulations, as well as with the increasingly detailed information requirements under grants and contracts, all have increased the indirect costs of the administration of sponsored research.

VI. Indirect-Cost Problems Arising within Academic Research Institutions

Two general types of intra-institutional problems related to indirect costs may be identified: (a) those relating to the determination of the indirect-cost rate structure for the institution, particularly as regards complex universities with large and varied types of organizational units; (b) and those affecting the internal allocation and use of indirect-cost reimbursements received by the institution.

The problem of determination of the appropriate rate structure for indirect costs at an institution is the responsibility of the federal agency in charge of review, audit, and establishment of rates under federal regulations. Separate indirect-cost rates might be established within a complex institution for large and relatively autonomous research units whose indirect costs varied substantially from those for the remainder of the institution. Such a determinatio presumably would be made in negotiation with the institution in terms of an equitable balance as between the institutional and the federal interest.

Conflicting interests and points of view often arise within research universities regarding both the validity of indirect-cost charges and the equity of internal budgeting of indirect-cost revenues. Faculty members and department heads, for example, sometimes feel that their individual projects do not require all of the indirect-cost services that are specified in the negotiated rate structure. They fail to understand that the latter is based upon an averaging of the costs of such services for all projects at the institution (or within the part of it covered by a particular rate structure). For the general executive officers of the institution, on the other hand, the totality of indirect costs represents obligations that must be met; and such costs increase generally in proportion to the expansion of research and other activities. Administrators are concerned, moreover, with the problem of meeting the indirect costs that are not recovered under federal regulations and under the law requiring the sharing of the costs of grant-supported research.

Steps need to be taken to assure better mutual understanding of the respective attitudes and concerns of both faculty and administrative groups. It is especially important for faculty members and department heads to understand that if the costs of sponsored projects are not fully reimbursed, they must be met by the reallocation of institutional funds from other programs and purposes.

The federal interest in the internal budgeting of indirect-cost revenues would appear to relate solely to the question of whether or not its sponsored projects have been provided with adequate indirect-cost services. It is not the federal responsibility or prerogative to enter into an evaluation of the educational budget of an institution, which includes indirect-cost revenues

as a component that must be integrated into the totality of the general revenues available for the educational and support operations of the institution as a whole. Federal responsibilities would seem to end with the determination that an institution's indirect-cost rates are justified, that its requests for reimbursement are valid, and that the indirect-cost services required for federally sponsored projects are satisfactorily provided.

VII. Proposals for Revisions of Federal Indirect-Cost Regulations

Two federal reports issued during 1975 have stimulated renewed discussion of reimbursement for the indirect costs of academic research. The first was submitted to the Committee on Appropriations of the U.S. House of Representatives by its Surveys and Investigations Staff (9). Although dated March 1975, the report was not released until February 12, 1976. The second document, still in draft form, was prepared in the Office of the Assistant Secretary, Comptroller, of the Department of Health, Education, and Welfare--as proposed revisions of FMC 73-8 (7).

The House Staff Report was devoted mostly to a detailed review of indirect-cost regulations and to implementation of the regulations within the Department of Health, Education, and Welfare. Particular attention was paid to statistical information on indirect-cost reimbursements, including the unavailability of such information from certain HEW agencies. Among other recommendations, the following proposals were of special concern to institutions of higher education and their associations:

> "The Investigative Staff suggests that the Committee may wish to request HEW to study the possibility of developing standard direct cost definitions and a single base for overhead distribution. Such definitions would require that certain expenses be considered direct costs; all other allowable expenses then would be included in indirect cost pools. By classifying specific cost elements as direct costs and causing all other allowable costs to be included in indirect cost pools, HEW program people would be able to compare indirect costs or supportive costs from one institution to another. In conjunction with the establishment of standard direct cost definitions, HEW should consider the establishment of a single base for applying indirect costs. Currently in the National Institutes of Health Indirect Cost Management System there are 92 separate base plans for applying indirect costs" (9, pp. 89-90).

It is not clear what relationship, if any, might have existed between the House Staff Report and the HEW draft of recommended revisions to FMC 73-8. The HEW recommendations were made available last fall in draft form to various federal agencies and to higher-education associations, in the presumed expectation that they would eventually be officially recommended to the General Services Administration as revisions of FMC 73-8. But, as noted above, administrative responsibility for FMC 73-8 was recently reassumed by the Office of Management and Budget (January 1, 1976); and if HEW decides to adopt official recommendations for revisions of FMC 73-8, they would be submitted to OMB.

Strong opposition to parts of both of these reports has been registered by universities and their association representatives. An Interassociation Committee on Indirect Cost, for example, has submitted to the House Appropriations Committee a statement entitled "Comments on the Report, 'Overhead Reimbursement to Grantees and Contractors, Department of Health, Education, and Welfare'." [4] While agreeing with several of the points made in the House Staff

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[4] The associations represented on this committee are the American Council on Education, the Association of American Medical Colleges, the Association of American Universities, and the Association of Land-Grant Colleges and State Universities.

Report, the Interassociation Committee took particular exception to the recommendation for "standard cost definitions and a single base for overhead distribution." In support of its opposition, the Committee cited one of the central points made in an earlier study of the indirect costs of academic research by the General Accounting Office: "It is not feasible to determine indirect costs by a fixed method or procedure applied uniformly under all conditions" (2).

One of the concerns expressed in the House Staff Report, which reflected questions raised in various committee hearings, was why the indirect costs of academic research appeared to be increasing more rapidly than direct costs. A paper on this subject, prepared by C.V. Kidd of the Association of American Universities, was recently submitted to the Representative Flood of the House Appropriations Committee (5). This paper incorporated information from various sources, including some of the data presented in an earlier section of the present report.

In order to coordinate the efforts of the universities and higher education associations to respond constructively to the two federal reports and to other expressions of concern in the Congress and the Executive Branch, a special committee of university presidents and business officers has been established with John W. Oswald, President of Pennsylvania State University and President of the Association of American Universities, as its chairman. The committee has addressed communications to Secretary David Mathews of HEW, to Representative Daniel J. Flood of the House Appropriations Committee, and to John J. Lordan, Chief of the Financial Management Branch of OMB. Among other actions,

it was reported that Roger W. Heyns, President of the American Council on Education, had written to the presidents of all ACE member institutions urging a careful review of their procedures for determining indirect costs in order to ensure full compliance with current guidelines. His letter announced that regional workshops were being scheduled by the National Association of College and University Business Officers and its Committee on Governmental Relations for the professional review of the principles and practices for determining indirect costs with business officers of institutions.

The committee's letter to Representative Flood also recommended that a special federal interagency group be established to conduct a full review of indirect-cost policies and to make recommendations for revisions to OMB. A group of university representatives would be formed to make concurrent suggestions--a procedure that was followed in the original drafting of Circular A-21.

VIII. General Conclusions

This report on the indirect costs of academic research has been focussed upon two main types of problems. The first type is primarily technical in nature, relating largely to accounting principles and procedures for determining the costs of research and for assuring reimbursement for indirect costs in accordance with established guidelines. The second category concerns issues of public policy relative to responsibility for the financing of academic research. That this responsibility is one that should be shared by universities and the federal government is generally recognized; but there is far from general agreement regarding the policies that should govern the sharing of the costs of federally sponsored projects.

In the light of the developments described in the preceding section, the prospects now seem favorable for a comprehensive review of the technical issues regarding the determination of research costs, indirect-cost rates, and improved compliance with established guidelines. Universities and their associations believe that a careful study of these problems by the staff of a special interagency committee will clear up many misconceptions about indirect costs; and they hope that one outcome will be concurrence in the conclusion of the earlier GAO study that emphasis upon costing principles and general guidelines is preferable to the imposition of rigidly uniform definitions and detailed accounting procedures upon all types of institutions. In any event, these issues would be resolved after a full review of the conflicting views and evidence; and however the technical disagreements might be decided, it seems reasonable to expect that improved administration of costing regulations would result--within both federal agencies and educational institutions.

Unfortunately, there is no parallel plan for resolving the public-policy issues related to indirect costs and the financing of academic research. By an act of Congress, since 1965 academic institutions have been required to share in the costs of research supported by federal grants. Such cost-sharing usually takes the form of the contribution of faculty time or some other kind of "direct" support, which obligates the institution to meet a corresponding share of the indirect costs of the sponsored research. And since indirect costs have been increasing recently at a considerably faster rate than the direct costs of research, the result is a kind of progressive "multiplier effect" associated with cost sharing which adds to the general financial burdens facing universities due to inflation/recession in the national economy.

The question of the extent to which academic institutions can continue to find the means to share in the costs of federally sponsored research--including those due to limitations upon the full recovery of indirect costs--cannot be answered from the results of the present study. From another study conducted under the sponsorship of the President's Biomedical Research Panel, however, it seems doubtful that universities can continue to find the resources to maintain these subsidies without unjustifiable damage to the remainder of their educational programs (6). The funding trends disclosed suggest that the federal government should carefully consider removing the cost-sharing requirement and otherwise modify its policies that limit the recovery of the indirect costs of academic research.

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APPENDIX A

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[a]Reproduced from Raymond J. Woodrow, Indirect Costs in Universities (11).